After Sales Technical Documentation

COMPACT HANDSFREE CAR KIT (CARK31) INSTALLATION GUIDE

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COMPACT HANDSFREE CAR KIT INSTALLATION GUIDE

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Introduction

This installation guide has been prepared to provide the basic information necessary to install the CARK31 car kit. The guide is not intended to be definitive, because different types and models of vehicle will require different installation work. The information given is for general guidance only.

NOTE: Refer to the Warnings below before commencing the installation procedure.

WARNINGS

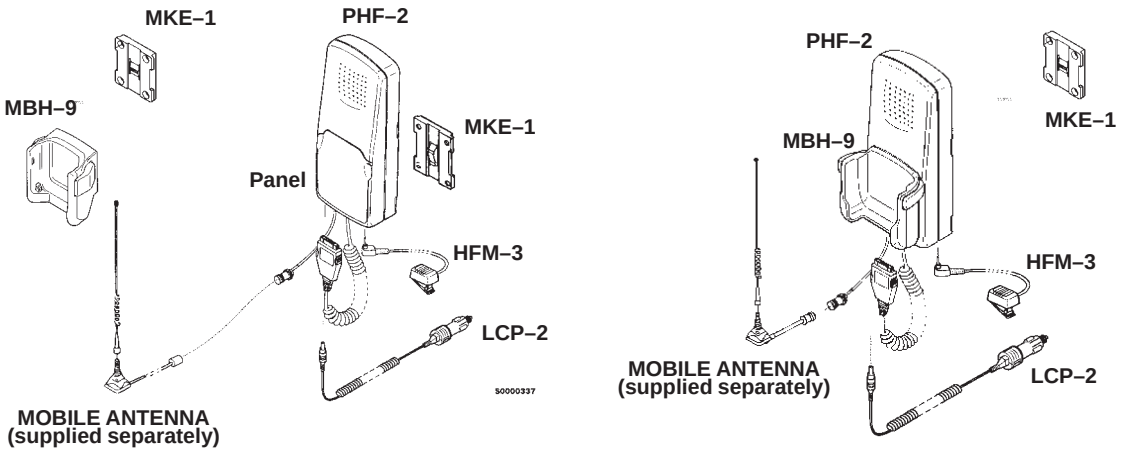
1. **CHECK THAT NORMAL CONTROL AND OPERATION OF THE VEHICLE IS NOT IMPAIRED BY THE INSTALLATION; IN PARTICULAR CHECK THE BRAKES AND STEERING THOROUGHLY.**
2. **ALTHOUGH ELECTRONIC SPEED CONTROL, ABS ANTI–LOCK BRAKE AND FUEL INJECTION SYSTEMS ARE RELATIVELY IMMUNE TO MALFUNCTION CAUSED BY NEARBY RADIO TRANSMISSIONS, SHOULD YOU EXPERIENCE FALSE OPERATION OF THESE SYSTEMS OR ARE IN ANY DOUBT WHATSOEVER AS TO THEIR FUNCTIONALITY, PLEASE CONSULT THE VEHICLE DEALER.**
3. **THE CARK31 KIT IS SUITABLE FOR USE ONLY IN VEHICLES WITH A 12V NEGATIVE EARTH SUPPLY. USE ON OTHER SUPPLY VOLTAGES OR ALTERNATIVE POLARITY WILL DAMAGE THE EQUIPMENT.**

Unpacking

Carefully unpack the equipment and ensure that the following items are present.

Item	Ref. Code	Additional Items / Notes
In–car Holder	MBH–9	
Compact Handsfree Unit	PHF–2	
Panel	9450369	Cover for PHF–2 (supplied fitted)
Mounting Plate (2 off)	MKE–1	12 fixing screws
Handsfree Microphone	HFM–3	1 flat mounting plate
Power Cable	LCP–2	
Cable Clip	CKH–1	
Mount Adaptor	MKE–4N	4 fixing screws & nuts – for mounting MBH–9 to PHF–2.

Figure 1: Assembly Schematic



Option 1 **Option 2**

The CARK31 kit allows handsfree operation of the phone in a vehicle and permits the phone battery to be fast charged. The kit, which requires an additional external antenna, derives its power from the cigarette–lighter socket.

CARK31 Component Parts

Compact Handsfree Unit (PHF–2) / In–car Holder (MBH–9)

This combination enables the phone to operate in handsfree mode. The coil cord from the PHF–2 unit plugs into the bottom of the phone, and the phone is then placed into the MBH–9 holder. The holder may be mounted either nearby the PHF–2 unit (option 1) or directly on the PHF–2 unit (option 2), as shown in Figure 1.

When the phone is located in the MBH–9 holder, it will operate automatically in handsfree mode. On removing the phone from the holder, the phone reverts to normal handset operation.

Mounting Plate (MKE–1)

The mounting plate (MKE–1) can be used to fix the MBH–9 holder to the vehicle interior (option 1) and also the PHF–2 unit to the vehicle interior (options 1 and 2). A Swivel Mount (Type HHS–1, Product Code 0650008), supplied separately, may also be used in place of the MKE–1 in this application.

Cable Clip (CKH–1)

The cable clip (CKH–1) enables the coil cord from PHF–2 to be secured when it is not connected to the phone. The cable clip should be mounted close to the MBH–9 holder using the self adhesive strip supplied.

Power Cable (LCP–2)

The PHF–2 unit derives its power from the vehicle's cigarette–lighter socket. The socket should have a positive centre contact and a negative barrel contact. The PHF–2 unit draws current under the following circumstances:

- when the phone is connected and switched on
- when the phone is connected and it's battery is being charged (irrespective of whether the phone is switched on or not)

No current is drawn by the PHF–2 unit under the following circumstances:

- when the phone is disconnected from the PHF–2 unit
- when the phone is connected and switched off (assuming the phone's battery has reached full charge)

NOTE: On some vehicles, power to the cigarette lighter socket is removed when the engine is switched off. To enable the PHF–2 unit to operate, when the engine is switched off, ensure the ignition switch is turned to the appropriate 'ON' position.

Handsfree Microphone (HFM–3)

The handsfree microphone can usually be installed on the driver's sunvisor or the vehicle's A–pillar. The main aim is to get the microphone as close to the driver's mouth as possible, and to attach the microphone to a surface that is mechanically quiet. The microphone should be mounted at least 3ft (1m) away from the PHF–2 unit to avoid acoustic feedback. The microphone connects to the microphone jack located underneath the PHF–2 unit.

Panel for PHF–2 Unit

The PHF–2 unit is supplied already fitted with the panel in place as shown in Figure 1 (option 1). The panel remains in place if the MBH–9 holder is mounted away from the PHF–2 unit (option 1). However, if the MBH–9 holder is mounted on the PHF–2 unit (option 2) the panel has to be removed – refer to the section **Converting the Compact Handsfree Unit.**

Mount Adaptor (MKE–4N)

The MKE–4N mount adaptor is used to mount the MBH–9 holder onto the PHF–2 unit. The adaptor comes complete with four fixing screws / nuts.

Mechanical Installation

When choosing a location for the PHF–2 unit / MBH–9 holder, ease of use and visibility of the phone's display should be the prime considerations.

CAUTION

ENSURE THAT THE PHF–2 COMPACT HANDSFREE UNIT / MBH–9 IN–CAR HOLDER IS SECURELY ATTACHED TO A RIGID SURFACE.

Converting the Compact Handsfree Unit

To convert the PHF–2 unit to accept the MBH–9 holder (see Figure 1 – option 2), proceed as follows:

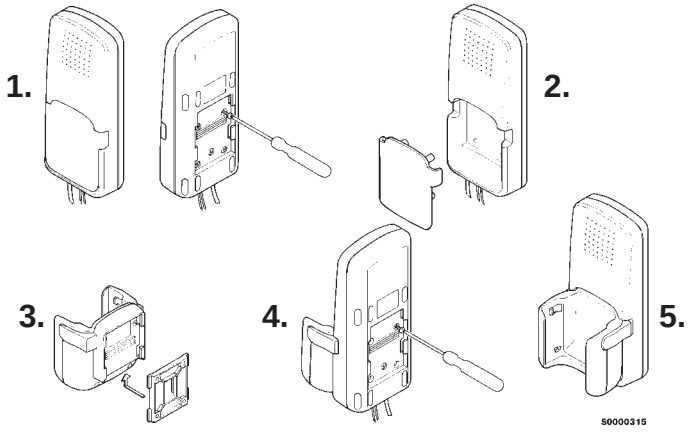
1) Remove the four outer cross–headed screws, securing the panel cover, from the rear of the PHF–2 unit (Fig 2 – picture 1).

2) Remove the panel cover (Fig 2 – picture 2).

3) Place the MKE–4N adaptor (smooth side facing up) on a flat surface. Locate the four nuts from the MKE–4N kit and insert them into the four hexagonal slots. Keeping the adaptor face up, position the adaptor between the two sets of lugs at the rear of the MBH–9 holder and push firmly until the adaptor clicks fully home (Fig 2 – picture 3).

4) Mount the MBH–9 holder in the slot on the front of the PHF–2 unit. Insert the four screws (from the MKE–4N kit) through the rear of the PHF–2 unit and tighten (Fig 2 – pictures 4 and 5).

Figure 2: Converting the Compact Handsfree Unit



Electrical Installation

WARNINGS

THIS EQUIPMENT IS NOT SUITABLE FOR USE ON A VEHICLE WITH A POSITIVE GROUND SYSTEM. OVERVOLTAGE OR WRONG POLARITY MAY CAUSE SERIOUS DAMAGE TO THE EQUIPMENT. THE MAXIMUM SUPPLY VOLTAGE RELATIVE TO GROUND IS 15.6 VOLTS.

THE PHONE SHOULD NOT BE LEFT SWITCHED ON FOR EXTENDED PERIODS (MORE THAN 1 WEEK) WITHOUT RUNNING THE VEHICLE'S ENGINE. FAILURE TO DO THIS COULD DRAIN THE VEHICLE'S BATTERY.

The cable connections for the kit are shown in the assembly schematics (Figure 1).

Antenna

NOTE: The CARK31 kit is designed to operate with a high quality external antenna. However, due to the many different types of antenna available, an antenna is NOT included as part of the kit. It is the responsibility of the dealer to advise on the most suitable type for a given installation.

The ideal location for the antenna is in the centre of the roof or boot lid. This position provides the best transmission and reception radiation pattern. Before drilling a hole, make sure that there is an acceptable route for the cable to the Compact Handsfree Unit. After drilling the hole for the antenna, remember to clean the area to ensure a proper and reliable connection between the antenna and ground. After cleaning the area, apply some rust–proofing compound to prevent future oxidisation. If the boot lid acts as an antenna for the vehicle radio, do not mount the telephone antenna on the boot lid.

To avoid drilling a hole in the vehicle's bodywork, a glass–mounted antenna can be chosen and located on the rear window of the vehicle.

NOTES: The connection between the Compact Handsfree Unit and the antenna must be via a non–radiating cable (eg. coax). Try to ensure the cable run is kept as short as possible to maximise antenna performance.

The antenna shall be mounted in a position such that no part of the human body will normally rest within 8" (20cm) of any part of the antenna for more than a few minutes while the equipment is switched on, unless there is an intervening metallic screen (eg. a metallic roof) at least 3.25 sq ft (0.3 sq m) in area.

Testing

Once installed, the equipment should be tested to ensure that it is operating satisfactorily and that the position of the units does not impair on the driver's ability to control and operate the vehicle in any way.

Use the phone to make a call when the vehicle is parked with the engine running. During the call, switch off the engine (refer to the note under the Power Cable heading). Ensure that the phone is operational with the engine on and off. For operating information refer to the User Guide supplied with the phone.